

REMARKS

In the final Office Action mailed March 20, 2003, the Examiner stated that the oath or declaration is defective. Applicants are filing herewith a new oath or declaration in compliance with 37 C.F.R. § 1.67(a).

In the Office Action, the Examiner rejected Claims 17 and 19-21 under 35 U.S.C. § 102(b) as being anticipated by Takiar et al. (U.S. Patent No. 4,723,197) ("Takiar"). To the extent the rejection applies to the amended claim, Applicants respectfully traverse the rejection.

Applicants respectfully submit that Claim 17 has been amended so that the claim reads an oxide layer, an adhesion layer formed on said oxide layer, and a first passivation layer formed on said adhesion layer, where the first passivation layer and the adhesion layer include at least one common chemical element.

Applicants respectfully submit that Takiar does not teach or suggest the desirability of the structure as recited in Applicants' independent Claim 17. Specifically, Applicants respectfully submit that puncture-resistant layer 22 of SiON will not prevent delamination between SiO₂ oxide layer 16 and passivation layer 18. In fact, Takiar discloses two layers, passivation layer 18, and polyimide layer 20 between oxide layer 16 and puncture-resistant layer 22.

Applicants respectfully submit that Claims 19-21 depend from allowable independent Claim 17, discussed above, and are allowable for at least the same reasons. Applicants respectfully request that the Examiner withdraw the rejection to Claims 17 and 19-21.

In the Office Action, the Examiner rejected Claim 18 under 35 U.S.C. § 103(a) as obvious over Takiar in view of Bryant et al. (U.S. Patent No. 5,698,456) ("Bryant"). To the extent the rejection applies to the amended claim, Applicants respectfully traverse the rejection.

Applicants respectfully submit that Bryant does not remedy the defects of Tokiar discussed above regarding Claim 17. Specifically, Applicants respectfully submit that

neither Tokair nor Bryant, alone or in combination, teach or suggest the desirability of the integrated circuit as recited in independent Claim 18.

Applicants respectfully request that the Examiner withdraw the rejection to Claim 18.

In the Office Action, the Examiner rejected Claim 22 under 35 U.S.C. § 103(a) as obvious over Takiar in view of Bryant and Ando et al. (Japanese Patent No. 406349814) ("Ando"). To the extent the rejection applies to the amended claim, Applicants respectfully traverse the rejection.

Applicants respectfully submit that Ando does not remedy the defects of Takiar and Bryant discussed above regarding Claim 18. Specifically, Applicants respectfully submit that neither Takiar, nor Bryant, nor Ando, alone or in combination, teach or suggest the desirability of the integrated circuit as recited in Claim 22.

Applicants respectfully request that the Examiner withdraw the rejection to Claim 22.

In the Office Action, the Examiner rejected Claim 23 under 35 U.S.C. § 103(a) as obvious over Takiar in view of Mu et al. (U.S. Patent No. 5,612,254) ("Mu"). Applicants respectfully traverse the rejection.

Applicants respectfully submit that there is no motivation to combine Mu with Takiar to achieve the integrated circuit as recited in independent Claim 23. Applicants respectfully submit that Takiar discloses a silicon dioxide insulating layer 16, a silicon nitride hard passivation layer 32, and a puncture-resistant layer 22. However, Applicants respectfully submit that puncture-resistant layer 22 will not serve to prevent delamination of passivation layer 32 from oxide layer 16. Applicants respectfully submit that there is no teaching or suggestion in Takiar to place a silicon oxynitride adhesion layer on a silicon dioxide insulating layer, and to form a silicon nitride hard passivation layer on the silicon oxynitride adhesion layer, as recited in Claim 23.

Applicants respectfully submit that Mu does not remedy the defects of Takiar discussed above. Applicants respectfully submit that Mu discloses a silicon dioxide layer

50, and a silicon oxynitride layer 80 on the silicon dioxide layer 50 (see Figure 8). However, Applicants respectfully submit that Mu does not teach or suggest the desirability of forming a silicon dioxide insulating layer, a silicon oxynitride adhesion layer formed on the silicon dioxide insulating layer, and a silicon nitride hard passivation layer formed on the silicon oxynitride adhesion layer, as recited in Claim 23. In fact, Mu teaches away from the invention, as it appears that the silicon oxynitride layer 80 of Figure 8 is polished away to form the structure of Figure 9, "After polishing the substrate (Fig. 7), a second silicon nitride layer 90, a second silicon dioxide layer 91, and a third silicon nitride layer 92 are deposited over the substrate." (Mu, col. 8, lines 40-43.) Therefore, Mu does not teach or suggest the desirability of an adhesion layer between oxide layer 50 and silicon nitride layer 90 (see Figure 9).

Applicants respectfully submit that neither Takiar nor Mu, alone or in combination, teach or suggest the desirability of the integrated circuit as recited in Claim 23. Applicants respectfully request that the Examiner withdraw the rejection to Claim 23.

In the Office Action, the Examiner rejected Claim 24 under 35 U.S.C. 103(a) as obvious over Takiar in view of Mu and Bryant. Applicants respectfully traverse the rejection.

Applicants respectfully submit that Bryant does not remedy the defects of Takiar and Mu, discussed above regarding Claim 23. Applicants respectfully submit that neither Takiar nor Mu nor Bryant teach or suggest the desirability of the integrated circuit as recited in Claim 24.

Applicants respectfully request that the Examiner withdraw the rejection to Claim 24.

Attached hereto is a marked-up version of the changes made to the abstract and claims by the current amendment. The attached page is captioned "VERSION WITH MARKINGS TO SHOW CHANGES MADE".

CONCLUSION

In view of the foregoing, it is believed that all claims now pending patentably define the subject invention over the prior art of record and are in condition for allowance, and such action is earnestly solicited at the earliest possible date.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2666 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17, particularly, extension of time fees.

Respectfully submitted,

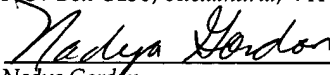
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Dated: 6/13/03



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I hereby certify that this correspondence is being deposited as First Class Mail with sufficient postage with the United States Postal Service in an envelope addressed to: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on June 13, 2003.


Nadya Gordon
Date 6/13/03

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS

The claims are amended as follows:

17. (Twice Amended) An integrated circuit (IC) comprising:
an oxide layer;
an adhesion layer formed ~~over~~on said oxide layer; and
a first passivation layer formed on said adhesion layer, said first
passivation layer and said adhesion layer including at least one common chemical
element.